BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Diploma in Engineering Pearson BTEC International Level 3 Diploma in Digital Engineering Pearson BTEC International Level 3 Extended Diploma in Engineering Pearson BTEC International Level 3 Extended Diploma in Computer Engineering
Unit number and title	**Unit 32: Computer System Principles and Practice**
Learning aim(s)	**A:** Examine the technology and security protection measures used in computer systems for different applications
Assignment title	System Analysis
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	You are a second year computer systems engineering apprentice and you have been asked by your supervisor to produce a report on aspects of two systems that your company use, one of a general nature and one a specific engineering application.

Task 1	System Analysis You must produce a report on two systems used by the company, a CAD system that runs on a PC and a system used within a CNC controller. The company currently have two systems, Siemens and Fanuc and you can choose to report on either. For each system your report must include the following: 1) an analysis of the hardware internal and external components associated with the application and their role in the application with a justification of their use, 2) an analysis of the operating, utility and application software used in each case including a justification for their use, 3) an analysis of the security threats and the systems and protection employed to guard against security threats in each case and a justification for the use of the systems employed, 4) an overall evaluation comparing the suitability of the technology and protection measures used in each and an indication of any improvements that would enhance the systems. The report should be well written in clear, technical language throughout.

Checklist of evidence required	A detailed report.
Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
32/A.D1	Evaluate, using language that is technically correct and of a high standard, the suitability of the technology and security protection measures found in two contrasting computer systems, suggesting possible improvements.
32/A.M1	Compare the suitability of technology and security protection measures found in two contrasting computer systems.
32/A.P1	Explain the features and functions of typical hardware components found in two contrasting computer systems.
32/A.P2	Explain the features and functions of the software used in two contrasting computer systems.
32/A.P3	Explain the security threats, vulnerabilities and protection measures in two contrasting computer systems.
Sources of information to support you with this Assignment	**Books** Adebiaye R.S. and Owusu T. D. (2013) Network Systems and Security Principles and Practice, CreateSpace Independent Publishing Platform, ISBN 978-1482626713 Anderson T. and Dahlin M. (2014) Operating Systems: principles and Practice, Recursive Books Ltd, ISBN 978-0-9856735-2-9 Clements A. (2006) Principles of Computer Hardware, Oxford University Press, ISBN 978-0-19-927313-3 Fan X. (2015) Real-time Embedded Systems: design Principles and Engineering Practices, Newnes/Elsevier, 978-0-12-801507-0 Marz N. and Warren J. (2015) Big Data: Principles and best practices of scalable real-time data systems, Hanning, ISBN 978-1-617290343